MODIS IOT Weekly Report
Mission Operations Days: 2000/197 to 2000/203
July 14, 2000 20:00:00 GMT to July 21, 2000 20:00:00 GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode
MODIS is in Science Mode
MODIS has an anomaly with the LWIR focal plane. See description below.

Blackbody		A On; B Off	Nominal
Calibration Electronics		A On; B Off	Nominal
Control Processor		A On; B Off	Nominal
Door:	Nadir	Unlatched, open	Nominal
	Space View	Unlatched, open	Nominal
	Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter		A On; B off	Nominal
FIFO Memory		1 & 2 On; 3 & 4 Off	Nominal
Format Processor		A On; B off	Nominal
PC FPA		A On	Nominal
Power Supply:	1	On	Nominal
	2	Off	Nominal
PV FPAs:	VIS	A On	Nominal
	NIR	A On	Nominal
	SMIR	A On	Nominal
	LWIR	A On	Nominal
Radiative Cooler:			
	Outgas Heaters	Off	Nominal
	LWIR FPA Heater	Off	Nominal
	SMIR FPA Heater	Off	Nominal
Scan Assembly		A On; B off	Nominal
SDSM		Off	Nominal
SRCA		Off	Nominal
Survival Heaters:	PS1	Enabled	Nominal
	PS2	Enabled	Nominal
Timing Generator		A On; B Off	Nominal
Flight Software		Rev BD	Nominal
Inhibit Ids Set		None	Nominal
TMONs enabled		66,67	Nominal

This Week's Completed MODIS Activities:

Saturday, July 15, 2000
None

Sunday, July 16, 2000
None

Monday, July 17, 2000
199/17:45 Real-time Set SVD software step position to 4020
199/17:46 Real-time Open SVD 100 steps further
199:19:12 Real-time Dump Door table
199/20:02:00 ATC - Blackbody to 270K
199/20:15:40 – 21:36:44 == DATA LOSS due to hardware problem at White Sands
(GSIF recorders down)

Tuesday, July 18, 2000
200/14:00:00 ATC Blackbody to 315K
200/14:04 Real-time Set Blackbody duty cycle to 100%
200/21:00:00 ATC Blackbody to 270K
200/21:00 Real-time Set Blackbody duty cycle to 33%

Wednesday, July 19, 2000
201/19:00:00 ATC Blackbody to 290K

Thursday, July 20, 2000
None

Friday, July 21, 2000
MODIS Roll Maneuver Sequence
203/11:57:18 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)
203/12:14:00 ATC Load - Set Formatter to Day Rate (for Lunar Roll)
203/12:14:02 ATC Load - Set SCIABNORM Flag to ABNORM
203/12:14:04 ATC Load - PC DC Restore OFF
203/12:14:06 ATC Load - PV DC Restore OFF
203/12:14:08 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)
203/12:19:38 ATC Load - Sector Rotation to 0 (Normal)
203/12:19:40 ATC Load - PC DC Restore ON
203/12:19:42 ATC Load - PV DC Restore ON
203/12:19:44 ATC Load - Set SCIABNORM Flag to NORM
203/12:19:46 ATC Load - Set Formatter to Night Rate (for Lunar Roll)
203/12:50:01 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Saturday, July 22, 2000

MODIS Lunar View Sequence #1 (no roll)
204/14:16:13 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)
204/14:27:10 ATC Load - Set Formatter to Day Rate (for Lunar Roll)
204/14:27:12 ATC Load - Set SCIABNORM Flag to ABNORM
204/14:27:14 ATC Load - PC DC Restore OFF
204/14:27:16 ATC Load - PV DC Restore OFF
204/14:27:18 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)
204/14:33:48 ATC Load - Sector Rotation to 0 (Normal)
204/14:33:50 ATC Load - PC DC Restore ON
204/14:33:52 ATC Load - PV DC Restore ON
204/14:33:54 ATC Load - Set SCIABNORM Flag to NORM
204/14:33:56 ATC Load - Set Formatter to Night Rate (for Lunar Roll)
204/15:12:11 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

Saturday, July 22, 2000
MODIS Lunar View Sequence #2 (no roll)
204/15:55:07 ATC Load - Set Formatter to Night Rate 00:03:15 early (for 50/50 SSR buffer)
204/16:05:02 ATC Load - Set Formatter to Day Rate (for Lunar Roll)
204/16:05:04 ATC Load - Set SCIABNORM Flag to ABNORM
204/16:05:06 ATC Load - PC DC Restore OFF
204/16:05:08 ATC Load - PV DC Restore OFF
204/16:05:10 ATC Load - Sector Rotation to -3072 (EA to SV and OBCs)
204/16:11:40 ATC Load - Sector Rotation to 0 (Normal)
204/16:11:42 ATC Load - PC DC Restore ON
204/16:11:44 ATC Load - PV DC Restore ON
204/16:11:46 ATC Load - Set SCIABNORM Flag to NORM
204/16:11:48 ATC Load - Set Formatter to Night Rate (for Lunar Roll)
204/16:51:05 ATC Load - Set Formatter to Day Rate 00:03:15 late (for 50/50 SSR buffer)

Sunday, July 23, 2000
None

Monday, July 24, 2000
206/20:02:00 ATC - Blackbody to 270K

Tuesday, July 25, 2000
207/14:00:00 ATC Blackbody to 315K
207/14:?? Real-time Set Blackbody duty cycle to 100%
207/21:00:00 ATC Blackbody to 270K
207/21:?? Real-time Set Blackbody duty cycle to 33%

Wednesday, July 26 2000
208/19:00:00 ATC Blackbody to 290K

Thursday, July 27, 2000
None

Friday, July 28, 2000
None

Maneuvers:

Wednesday, August 2, 2000 - Drag makeup maneuver (215/19:30:00)

MODIS Anomalies:

The Radiative Cooler has negative margin, therefore the cold focal planes are no longer under thermal control. This affects bands 5, 6, 7, and 20-36. Analysis is underway. Solar Diffuser Door operations are suspended during this analysis.

Current maximum and minimum temperature ranges of the LWIR FPA:
Friday, July 21, 2000:
202/18:27:17 max = 84.026K
202/19:27:01 min = 83.848K

General Instrument Comments:

MODIS is in Science Mode on the A-side with the SVD and NAD open.

MODIS Telemetry Trends:

See MODIS Anomalies section.

Non-MODIS Significant Events:

Wednesday, July 19 (Day 201) the EOS Operations Center switched to the upgraded on-line operations software build, Rev C. They will also upgraded to Project Database (PDB) 28. The switchover went well and the MODIS IOT is comfortable with the upgrades.

Data processing by EDOS is currently running at a "degraded level". For a detailed summary of the events that have affected their products, view the EOS System Status web page (http://jupiter02.gsfc.nasa.gov:591/sysstat/) and select the EDOS summary link at the top of the page. A key item to note is from day 6/27/2000 at 12:11:19 PM: " The second major issue is the amount of data that EDOS is receiving since ASTER has been fully turned on." With the new, higher data output of ASTER, even less "spare" time will be available to EDOS for the processing of backlogged or reprocessing of data.

Limited Life Item Status:

SRCA 10W Lamp #1: 170.4 of 500 hours
SRCA 10W Lamp #2: 134.3 of 500 hours
SRCA 10W Lamp #3: 143.5 of 500 hours
SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 555.6 of 4000 hours
SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1381 of 3022 Movements
Nadir Aperture Door: 532 of 1316 Movements
Space View Door: 437 of 1316 Movements